

Assessing Disasters and Vulnerability in mountainous region of Northern Pakistan

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The '2010 Pakistan Floods' caused a major loss of human lives, houses, livestock, crops and agricultural land in major parts of the country. In the Baltistan region of Northern Pakistan, it altered the flow direction of the river Indus, triggering the erosion of a village resulting in a major disaster in 2013. It also triggered debris flows in another village, resulting in loss of human lives and destruction of houses, agricultural and pasture land. Examining the case of these two villages, the main objective of this paper is to explain the underlying aspects of social vulnerability apparent in the context of these disasters. Paper utilises the concepts of historical political economy and intersectionality and aims to contribute to a better understanding of vulnerability by addressing the need for a deeper social analysis such as social hierarchies and intersectionality.

Study Area

This study was conducted in two villages of Baltistan, Pakistan. Baltistan is an approximately 25000 km² highly mountainous area, located at the juncture of western Himalayas and central Karakorum in Gilgit – Baltistan region of Northern Pakistan.

The region is famous for world's highest mountain peaks and longest glaciers outside the polar region. The slope and high mountain terrain offers a very limited plain area for agriculture and housing requirements. Hence, most of the settlements are located on alluvial fans - an oasis – offering suitable but limited land for agriculture.

The region has been under the administrative control of Pakistan since 1947; however, it faces a limbo as the region has a province-like status without any political representation in the Parliament or the Senate of Pakistan.

Case 1: Village Hoto

In village Hoto, erosion started after the major flood of the year 2010. Flood diverted the direction of the river flow towards the Pokora and Gons settlements of village Hoto. Consequently, there was a major loss of land in the year 2013. Both the settlements suffered direct and indirect losses due to the loss of land; however, the intensity of losses was relatively higher in Pokora as compared to Gons. The nature of losses varied with the intensity of erosion over the years. Land erosion started with loss of a communal pasture of the village along the riverbank. With the passage of time, erosion processes expanded towards the settlement and during the main erosion of 2013, losses included houses, agricultural land and crops in Pokora. Households suffered losses of varied nature. The most adversely affected in terms of physical losses were the households that lost houses, agricultural and forested land. Remaining majority suffered losses of agricultural and forested land.

Case 2: Village Qumra

In the case of village Qumra, the disaster was in the form of debris flow that took place in August 2010. Qumra was among the worst affected areas of Baltistan region. The losses included human lives, houses, agricultural land, irrigation water channels, irrigation water reservoirs and mid-level pasture. Within Qumra, the effects of disasters varied among the hamlets. Thirty-three people in Aliabad while five in Shutt settlement lost their lives. Many people suffered injuries. The damage/loss of the house resulted in the loss of all the belongings and animal barns. Many households lost their livestock due to damages to their barns. As the debris flowed down the watershed, it also affected the mid-level pasture on the way. In both settlements, it destroyed agricultural land including loss of fruit and non-fruit trees. Harvested wheat crop in the agricultural fields was also destroyed. Along with damages to irrigation water system, drinking water system was also affected.

Political Economy of Baltistan in a historical context

The historical political economy of Baltistan region has a critical role in defining the contemporary social hierarchical structures and consequent power relations that strongly define the social vulnerability. In this context, it is important to describe a brief history of Makpon and Dogra dynasties.



Makpon and Dogra Dynasty

The early history following medieval one represents a diverse array of events and eras that shaped the region, as it exists today. Predominantly, local dynastic rulers reigned the region, most popular being Makpon Dynasty started with the arrival of Ibrahim Shah in Baltistan from Kashmir. The Makpon dynastic rule prospered and expanded until it was weakened by the internal rifts. As the local ruler lost their control, Baltistan fell in to the control of Sikhs in 1840. After a short lived control by Sikhs, it came under the rule of Gulab Singh who bought Kashmir for 7,5000,000 Rupees by signing the Treaty of Amritsar in 1848 with British administration in India. Gulab Singh then became the first Dogra ruler of state of Jammu and Kashmir by merging Kashmir with Jammu. Dogra rule continued until November 1, 1947 when region was declared as independent 'Islamic Republic of Gilgit' with request for accession to government of Pakistan.

Marginalisation: Tyranny or Irony

A common characteristic that marred of the dynastic rule of Makpons or Dogras is the marginalisation and tyranny experienced by the common people, which is important to describe here to present the context for discussing the social vulnerability and its roots in the socio- economic and political systems of the study villages. During the dynastic rule of Makpons and earlier rulers for that matter, various classes structured the state. The dynastic ruler and his family members were part of the ruling class and owned vast appropriated land. The village head was responsible for collecting revenue from his village and act as an advisor to ruler. Peasants being common people experienced marginalization and tyranny as they were paying revenues as agricultural produce both from their agricultural and pastoral land to the rulers. Not much has changed as classes that existed over centuries have a strong influence on contemporary social structures, livelihood practices and land holdings. For example, the family members of the dynastic rulers are holding key political positions as well as ownership of vast land and still collect revenues from tenants.

Land Holdings and Livelihood Practices

Each household in both the study villages own a piece of land in the form of agricultural field, pasture or barren land. Many households also have a share of land in mid-level pasture, which is a source of fodder for animals. The size of the land holding varies from about one kanal to 30 kanals (one kanal is equivalent to about 505.857 square meters). Historical political economy has defined the ownership of land. Village leaders who are at the top of hierarchy own more land holding, compared to others which authorises them to hold the leadership position. Earlier, most of the households were relying on subsistence agriculture. In the last few decades, the region has experienced a transition towards income generation through access to the market economy. This change has contributed to the diversification of income sources. Although traditional practices i.e. agriculture and livestock rearing still exist, however their contribution to the household's income is more at the subsistence level for majority of the households. Few households that own relatively larger land generate income by selling potatoes and fruits including apricots. Men from households with limited landholdings are working as mason, labourer, or driver on daily wages. As masons or labourers, they are constructing houses or terracing agricultural fields, which is done in summer time as harsh winter season make it impossible to carry out these tasks.

Socio-Political vulnerability

The political history of the region and contemporary economic status define the distribution of power and its role in defining the socio-political vulnerability in the study villages. Both the study villages have leaders who are key decision makers on matters related to the development, use and maintenance of various communal resources. The designation is primarily lineage based, with material possessions particularly land ownership and sources of income generation (e.g. number of sons employed) as major defining factors. In both the study villages, village leaders mentioned the relationship of their ancestors with rajas as his associate. Along with that, village leaders own relatively larger land compared to rest of the people in the village. The most vulnerable households are the ones with minimum or - in exceptional cases - no land holding and are either daily wagers or with no source of income due to lack of employment or deceased male household head, who is generally the source of income. Some of them are also tenants/sharecroppers.

The vulnerable households suffered severe impacts of losses after the disaster. E.g., sharecroppers lost tenancy, and the loss of agricultural land affected the subsistence wheat production. Similarly, loss of agricultural and forested land affected livestock rearing and fuel wood collection. Some households became landless and had to migrate to a different location.

